

CLAIMS

What is claimed is:

1. A key pad assembly comprising:
a top cover placed over a stack of keypad components; and
a bottom cover placed under the stack; the top cover and the bottom cover over
molded around the stack to form a self contained key pad unit.
2. The key pad assembly of claim 1, the top cover and the bottom sandwich the
stack.
3. The key pad assembly of claim 1, the top cover and the bottom cover are over
molded to create a sealed common boundary.
4. The key pad assembly of claim 1, the stack comprises a printed circuit board with
a flex member, an electro luminous panel, a silicone membrane with a plurality of keys,
placed on top of each other.
5. The key pad assembly of claim 3, the flex member provides an electrical
connection between the self contained key pad unit and a device that hosts the self
contained key pad unit.
6. The key pad assembly of claim 5, further comprising an identification component
that identifies the key pad to the device.
7. The key pad assembly of claim 5, the flex member protrudes out a trough of the
self contained key pad unit.
8. The key pad assembly of claim 6, the bottom cover with a recess that houses a
speaker therein.

9. The key pad assembly of claim 1, the top cover and bottom cover fabricated from at least one of polycarbonates, thermoset plastics, and thermoformed plastic.
10. The key pad assembly of claim 1, an illumination color or a brightness on a surface of the keypad indicates a mode of the key pad.
11. A method of fabricating a self contained key pad comprising:
sandwiching a plurality of key pad components between a top cover and a bottom cover; and
insert molding around the key pad components for an encapsulation thereof between the top cover and the bottom cover.
12. The method of claim 11 further comprising sandwiching the key pad components between the top and bottom cover.
13. The method of claim 11 further comprising housing a speaker in a recess of the bottom cover.
14. The method of claim 11 further comprising providing electrical connections to a host unit *via* a flex member.
15. The method of claim 11 further comprising providing an identification tag that automatically identifies the self contained key pad to a host unit upon mounting thereon.

16. A self contained key pad comprising:
 - a stack comprising:
 - a membrane with a plurality of keys placed thereupon,
 - a printed circuit board positioned beneath the membrane;
 - a top cover placed over the stack; and
 - a bottom cover placed under the stack, the top cover and the bottom cover define a common boundary around the stack, the common boundary over molded to encapsulate the stack between the bottom cover and the top cover.
17. The self contained key pad of claim 16, the common boundary includes a contact surface of the top and bottom cover.
18. The self contained key pad of claim 18, the common boundary includes a perimeter common to the top and bottom cover.
19. The self contained key pad of claim 18, the bottom cover connected to a piezo electric speaker.
20. The self contained key pad of claim 18, the bottom cover contacts the printed circuit board.
21. The self contained key pad of claim 18, the top cover and the bottom cover sandwich the stack.
22. A self contained key pad comprising:
 - means for encapsulating a stack of key pad components between a top and bottom cover to form a stand alone key pad unit; and
 - means for connecting the stand alone key pad unit to a host device.